CONSULTING ASSISTANCE ON ECONOMIC REFORM II

REPORTS

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Why Transition May Be More Successful Than You Think It Is (Draft Report)

Andrew M. Warner

Report J
November 2000

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Why Transition May be More Successful Than You Think it is.

Andrew M. Warner[1]

November, 2000

1. Introduction

A glance at recent data from the post-communist world tells an apparently pessimistic story. Despite ten years of transition, in 1998 the Transition countries of Eastern Europe as a group grew at an annual rate of 1.8 percent in per-capita terms. The Transition countries of the Former Soviet Union grew at an annual rate of negative 2.1 percent. In the same year, the 15 countries of the European Union grew at an annual rate of 2.5 percent (see table 1 for complete figures). Taken at face value, since both groups of Transition countries grew slower than Europe, these numbers imply no catch-up. In 1998, the Eastern European and Post Soviet groups of counties had per-capita GDP's of 33 percent and 20 percent of the European average respectively. If current trends continue, it appears that they well remain at roughly these levels.

The picture for individual counties is not greatly different. Some individual countries appear to be catching up, but not many, and with a few exceptions, not very fast. Table 2 shows that of the 25 transition countries listed, only 13 had growth rates that exceeded the European Union average during the three years between 1996 - 1998. If these thirteen countries continued on the path exhibited during these years, the number of years it would take to reach just 75 percent of Europe can be calculated to range between 10 and a century (table 2). Only 5 of the 25 are projected to reach this goal before 25 years.

Many have argued that the most fundamental challenge for Transition economies is structural change. In part, this is true by necessity since Gosplan, the Soviet Planning Agency, no longer exists. The death of this Mega-consumer has meant that economies now need to produce for the preferences of the market rather than the preferences of Gosplan. To the extent that these preferences differ, that requires structural change.

The argument of this paper is that structural change is so important that one needs to analyze growth and structural change together in order to make much sense of the aggregate growth statistics. Otherwise it is very easy to misread the numbers, particularly regarding convergence times. In addition, structural change is in all likelihood a necessary condition for sustainable growth. One reason for believing this is that the older industries are unlikely to grow substantially in the long run beyond their current levels. The older Soviet industries generally have obsolete capital and their existence and location was dictated by Gosplan for reasons that were unconnected to growth potential or comparative advantage.

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If we accept that the older state industries will not be growth engines, then it follows as a matter of logic that future GDP of the transition countries will be heavily dictated by what happens in the newer industries. It is growth in this sector specifically that is important to analyze.

The first point of this paper is to note that growth rates in most transition economies are in fact a weighted average between two very different sectors: a private sector that is growing and a state sector that is declining. It makes a big difference for the future how these two sectors are behaving. Take recent experience in Bulgaria as an example. In 1999 the Bulgarian economy grew at an annual rate of about 1.79 percent. This growth rate was widely regarded as disappointing for a country that had reformed so extensively since its crisis in 1996-1997. Even if the European Union grew rather slowly at only 1 percent per year, Bulgaria would only reach 75 percent of Europe well into the next century: 167 years from now.

But Bulgaria's growth in 1999 was actually a weighted average between a private sector that grew at an annual rate of 6.41 percent and a state sector that declined at -6.3 percent per annum. Such an economy will reach 75 percent of Europe in just 28 years.

To illustrate this point, figure 1 shows the dynamics of two hypothetical economies very much like this Bulgarian example. Both economies start out with the same aggregate growth rate of 2 percent. However, all sectors in economy 1 grow at this rate whereas economy 2 is sub-divided into one sector growing at 6 percent and another sector declining at 6 percent. The initial weights in the two sectors are 2/3rds and 1/3rd respectively, and both economies start out with incomes levels at 20 percent of the European average. Europe is assumed to grow at 1 percent per annum. The figure shows that in the year 2030, economy 1 will have reached only 27 percent of Europe while economy 2 will already be at 83 percent. So the difference in convergence times is huge even though both economies initially exhibit the same aggregate growth rate.

Furthermore, it is well known that GDP in transition economies has exhibited a u-shaped pattern over time; declining during the early years of transition but rising somewhat later. It is worth mentioning that this pattern can be generated by nothing more than two sectors having sharply divergent growth rates. In figure 2 we show simulations with two sectors like the economy above: one growing at 6 percent and the other declining at 6 percent. If the declining sector starts out with more than half of GDP, then aggregate GDP in this economy will follow a u-shaped pattern. Hence, to some extent the u-shaped pattern we have observed may simply the normal dynamics we should expect from a growing private sector and a declining state sector.

2. An Example of Rapid Structural Change: Bulgaria 1997-2000.

Bulgaria is now a particularly interesting example of the connection between structural change and growth. Bulgaria's macroeconomic and banking crisis of 1996-1997 led to a new reform-minded government in April 1997 and the introduction of a Currency Board in

July 1997. By the end of the year foreign reserves had doubled, the money supply doubled, inflation disappeared, interest rates were low and the exchange rate was fixed and was very stable.

For those who believe that Macroeconomic stability is sufficient for growth, these events were promising.. However, at the same time the Bulgarian banking system was very weak and was not attracting additional deposits. Apparently, much of the extra cash was being saved outside of the official banking system. In addition, there were fears that the Currency Board arrangement would lock Bulgaria into an uncompetitive exchange rate. The lack of formal financial intermediation and an overvalued currency were thought to be two important obstacles to faster growth. In addition, those who believed that good institutions were a necessary condition for growth were not optimistic about Bulgaria.

As mentioned above, the aggregate growth figures in Bulgaria appear to confirm this pessimism about growth prospects. Table 4 shows recent growth in Bulgaria divided into economic sectors (Agriculture, Mining, Manufacturing etc.) and reported separately for the year 1999 and the first two quarters of 2000 (both of which are year over year figures with respect to the same quarter in 1999).

The main point is that it is difficult with this kind of presentation to see prospects for fast growth or particular sectors which might be the engines of future growth. The 8.75 percent growth in output in the second quarter of 2000 is discounted by many as being the by-product of a depressed 1999:2 during the Kosovo conflict rather than a sign of sustainable fast growth.

However, now look at table 5 which presents the exact same figures for the *private sector*. Overall, private sector growth was 6.41 percent in 1999, and 7.57 percent in 2000:1 and a whopping 19.19 percent in 2000:2.

If we look at particular sectors to identify growth engines, the following stands out. First, since the contribution of a sector to overall growth is the product of its share in output and its growth rate, one can see that Forestry, Mining and Electricity, Gas and Water have output shares that are too small to make a difference. On top of this, Agriculture and other services at the bottom are not growing so they are not making a contribution to growth. The growth engines are Manufacturing, Construction (except 1999) and four service sectors: Transportation, Communications, Trade and Finance. These sectors accord well with casual observation of the vibrant sectors in Bulgaria.

These figures raise a number of additional issues that will be examined in later versions of this paper. One, what are the sources of this apparently rapid growth in the private sector in Bulgaria and will they last? One can distinguish a number of economic sources. First is simple reallocation of factors from the state sector to the private sector. This may be expected to give a one-time boost to aggregate GDP as workers migrate to activities where they have higher marginal products. The private sector gains by more than the state sector declines, and the economy shows a productivity gain in the aggregate. One of the reasons for thinking that this shift raises productivity is that there is probably better matching between jobs and skills in the private economy than in the state industries. However, much of this transfer is simply a shift of resources that raises the private sector and lowers the state sector but has no impact on the aggregate numbers. The most obvious example of this transfer is privatization which is essentially a legal re-classification of the enterprise. But

the transfer is going on in other ways as workers gradually leave jobs in the state industries. Third aspect to consider is that the worker shifting to the private sector moves to a growing industry, where there may be future productivity increases from learning by doing. The private sector is probably developing in sectors in which the country has a comparative advantage and by shifting resources, the economy shifts its weight to growing sectors and registers a sustained productivity increase. This is the part of the growth in the private sector that can last. A final consideration is that a part of the private sector increase is probably unrecorded, in the hidden economy. So actual growth may be higher than recorded. This needs to be analyzed because there is an incentive to under-report both the numerator (profits and wages) and the denominator (employment) of statistics on private sector productivity growth. Its not clear which is under-reported more.

3. Private Sector Growth Rates in all Transition Counties

The differing behavior of the private sectors and the state sectors is an issue in all transition economies. In this section, I present some calculations that are designed to divide all transition economies into these two sectors and then calculate separate growth rates and GDP figures for the private sectors. This data will help us understand what are the dynamics of private sector growth in transition economies. For example: are they declining or will fast growth in the private sector continue?

Let y stand for output with the superscripts p and s standing for private and state. Let s^p stand for the share of GDP in the private sector. Output in the two sectors are by definition:

$$y^p(t) = s^p(t) \cdot y(t)$$

$$y^s(t) = (1 - s^p(t)) \cdot y(t)$$

The EBRD provides estimates of the share of GDP in the private sector. Hence private sector growth can be estimated by the following equation..

$$1 + g^p(t) = \frac{s^p(t+1)}{s^p(t)} \frac{y(t+1)}{y(t)}$$

or

$$g^p(t) = \frac{s^p(t+1)}{s^p(t)} \frac{y(t+1)}{y(t)} - 1$$

Furthermore, growth in the entire economy is a weighted average of growth in the two sectors, with the shares as weights.

$$1 + g(t) = [1 + g^p(t+1)] \cdot s^p(t) + [1 + g^s(t+1)] \cdot [1 - s^p(t)]$$

So a given aggregate growth rate can always be expressed as the sum of the contributions from the two sectors.

$$g(t) = g^p(t+1) \cdot s^p(t) + g^s(t+1) \cdot [1 - s^p(t)]$$

This equation reminds us that a sector's contribution to growth, the $g^p(t+1) \cdot s^p(t)$ term, is the product of its growth rate and its share, not just its growth rate. This makes a difference since some Transition economies started out with low shares of output in the

private sector. Thus they recorded huge growth rates in private output but the contribution of the private sector to overall growth was small because the sectors were small.

The Appendix to this paper shows the calculations for private sector growth rates, $g^p(t)$, and the calculations for the private sectors contributions to growth, $g^p(t) \times s^p(t-1)$; for many Transition economies. Figure 3 shows $g^p(t)$ graphed against transition time. Transition time is years since the transition started in each country. The assumed dates for the start of transition is given in table 3. Figure 4 shows $g^p(t)$ graphed against calendar time. Figures 5 and 6 then show the private sector contribution to growth, $g^p(t) \times s^p(t-1)$; graphed against transition time and calendar time respectively. The horizontal line in each figure connects the median points for each year.

On average, both types of growth rates show a rise and then a fall over time. The decline is less pronounced for the private sector contribution to growth. The question to be analyzed in later versions of this paper is what distinguishes the countries where private sector growth is petering-out from the ones where private sector growth is continuing.

Table 1 *Regional GDP and Growth*

GDP per-capita

	European TEs	*FSU region*	*EU 15*	*Southern European 3**
1989	6475	6440	-	-
1990	6101	6214	-	-
1991	5415	5769	-	-
1992	5245	4680	18642	13781
1993	5300	4164	18463	13569
1994	5516	3608	18944	13829
1995	5835	3450	19334	14177
1996	6053	3351	19642	14529
1997	6190	3401	20134	15029
1998	6302	3330	20643	15582

Growth per capita

	European TEs	*FSU Region*	*EU 15*	*Southern European 3**
1989				
1990	-5.8	-3.5	-	-
1991	-11.2	-7.2	-	-
1992	-3.1	-18.9	-	-
1993	1.0	-11.0	-1.0	-1.5
1994	4.1	-13.4	2.6	1.9
1995	5.8	-4.4	2.1	2.5
1996	3.7	-2.9	1.6	2.5
1997	2.3	1.5	2.5	3.4
1998	1.8	-2.1	2.5	3.7

European TEs (European Transition Economies); FSU Region (Countries of the Former Soviet Union); EU 15 (15 Countries of the European Union); Southern European 3(Italy, Spain and Greece)
Source: Authors Calculations

Table2 Number of years to close to within 75 per cent of EU-14 income (based on 1996-98 and 1998 growth rates)

	Current gap (1998)	*Growth 96-98*	*Growth of EU-14 96-98*	*Years to close to 75 %, at 96-98 growth rates*	*Growth 1998*	*Growth of EU-14 1998*	*Years to close to 75 % (1998 growth rates)*
Albania	12	1.9	2.4	-	7.0	2.5	41
Armenia	12	5.7	2.4	56	7.6	2.5	36
Azerbaijan	8	4.8	2.4	93	9.2	2.5	33
Belarus	26	7.5	2.4	21	8.3	2.5	18
Bulgaria	20	-4.4	2.4		4.4	2.5	70
Croatia	23	5.1	2.4	44	2.1	2.5	
Czech Republic	52	0.7	2.4		-2.2	2.5	
Estonia	27	7.5	2.4	20	5.1	2.5	39
Georgia	10	9.3	2.4	29	3.9	2.5	144
Hungary	36	3.9	2.4	49	5.4	2.5	25
Kazakhstan	16	0.2	2.4		-2.3	2.5	
Kyrgyz Republic	11	6.3	2.4	49	1.8	2.5	
Latvia	20	6.2	2.4	35	5.4	2.5	46
Lithuania	24	6.2	2.4	30	5.6	2.5	37
Macedonia	15	1.0	2.4		2.2	2.5	
Moldova, Rep. of	6	-5.1	2.4		-8.6	2.5	
Poland	33	5.9	2.4	23	4.8	2.5	36
Romania	19	-3.3	2.4		-7.0	2.5	
Russian Federation	20	-2.1	2.4		-4.3	2.5	
Slovak Republic	40	5.7	2.4	19	4.3	2.5	35
Slovenia	64	4.0	2.4	10	4.0	2.5	11
Tajikistan	5	-0.4	2.4		4.0	2.5	181
Turkmenistan	7	-11.9	2.4		3.3	2.5	296
Ukraine	10	-4.4	2.4		-1.1	2.5	
Uzbekistan	12	1.0	2.4		1.9	2.5	

Source: author's estimates using equation yi(t)/ye(t) = yi(0)/ye(0)*exp (gi-ge)*t , where yi is GDP of economy i, ye is GDP of EU14, t is time and gi and ge are annual growth rates.

Table 3. *Reform indexes at the start of transition. (1=maximum reform)*

	Year in which main policy path was first implemented.	*Reason for choosing that year*	*Reform Index in that year*	*Reform Index in 1992*
Albania	1993	Democrats won elections in 1992	0.70	0.66
Armenia	1992	Year after independence	0.39	0.39
Azerbaijan	1992	Year after independence	0.25	0.25
Belarus	1992	Year after Minsk accords dissolved the Soviet Union	0.20	0.20
Bulgaria	1993	Elections in October 1991, but elected government lost power one year later. 1993 policy decisions set the precedent for the next five years.	0.66	0.86
Croatia	1992	Year after secession from Yugoslavia	0.72	0.72
Czech Republic	1991	Year after June 1990 elections in which Civic Union and Public Against Violence won elections.	0.79	0.86
Estonia	1992	Year after independence.	0.64	0.64
Georgia	1996	Year after Shevardnadze won elections under new constitution ending civil war	0.61	0.32
Hungary	1991	Year after free elections	0.74	0.78
Kazakhstan	1992	Year after presidential election	0.35	0.35
Kyrgyz Republic	1993	Year after Akayev started to implement reform programme	0.60	0.33
Latvia	1992	Year after independence	0.51	0.51
Lithuania	1993	Year after 1992 free elections ended political and constitutional deadlock	0.78	0.55
Macedonia	1992	Independence declared in January 1992	0.68	0.68
Moldova, Rep. of	1992	Year reforms implemented after December 1991 elections	0.38	0.38
Poland	1990	Year of reforms under Mazowiecki government	0.72	0.82
Romania	1991	Year after anti-Ceausescu communists consolidated power	0.36	0.45
Russian Federation	1992	Year after failed 1991 coup	0.49	0.49
Slovak Republic	1991	Year after June 1990 elections, in which Civic Union and Public Against Violence won elections	0.79	0.86
Slovenia	1992	Year after secession from Yugoslavia	0.78	0.78
Tajikistan	1992	Year after independence	0.20	0.20
Turkmenistan	1992	Year after independence	0.13	0.13
Ukraine	1992	Year after independence	0.23	0.23
Uzbekistan	1992	Year after independence	0.26	0.26

Source: Reform index is taken from data in Havrylyshyn et al. (1998), who in turn rely on de Melo et al. (1996) for the years 1990-93 and the indicators in the EBRD's transition reports thereafter.

Table 4. Sources of Growth in Bulgaria , 1998 - 2000

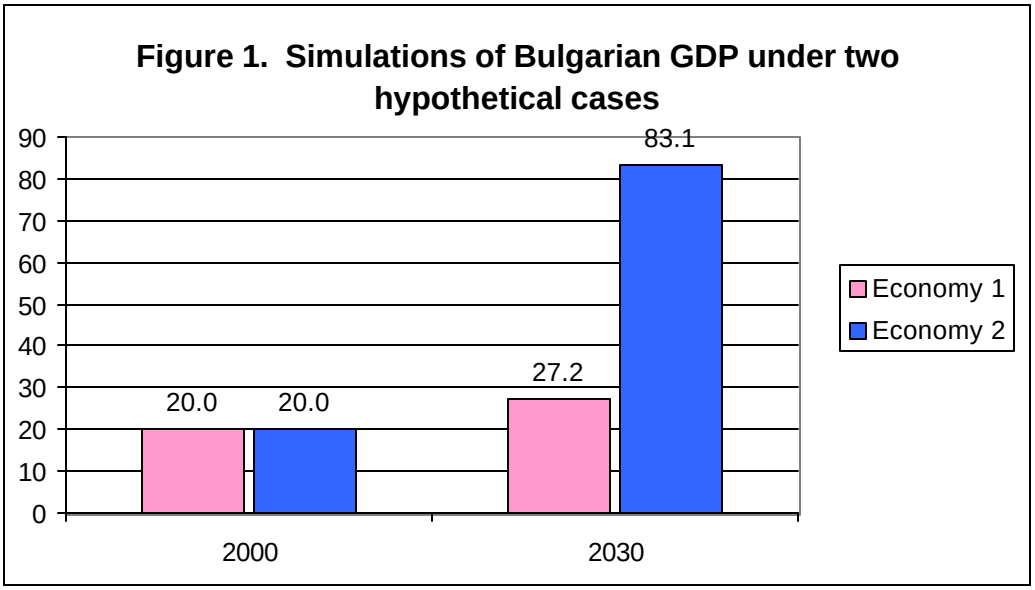
	1998	1999			First Quarter 2000			Second Quarter 2000			2000:Q2
		1998 to 1999			1999:Q1 - 2000:Q1			1999:Q2 - 2000:Q2			
	Share of GDP %	Growth in Output	Growth in Employment	Growth in Productivity	Growth in Output	Growth in Employment	Growth in Productivity	Growth in Output	Growth in Employment	Growth in Productivity	Share of GDP %
Agriculture and Forrestry	*21.07*	0.59	-9.54	10.1	-24.77	-21.12	-3.65	-28.26	-17.04	-11.22	*11.38*
Agriculture	*20.73*	0.73	-5.67	6.4	-25.45	-14.72	-10.74	-29.37	-11.64	-17.73	*11.03*
Forrestry, hunting and fishing	*0.34*	-8.46	-23.10	14.6	12.28	-45.74	58.02	43.30	-38.39	81.70	*0.35*
Industry	*28.69*	-4.36	-10.05	5.7	6.85	-14.53	21.38	8.62	-12.53	21.15	*29.86*
Mining Industry	*1.53*	-1.32	-15.00	13.7	63.25	-19.13	82.38	-27.47	-15.65	-11.81	*1.11*
Manufacturing Industry	*19.08*	-5.87	-11.09	5.2	-1.89	-15.76	13.87	9.33	-13.71	23.04	*20.80*
Electicity, gas and water	*4.34*	0.52	-0.49	1.0	17.38	-1.13	18.50	11.26	-0.32	11.58	*4.19*
Construction	*3.74*	-3.55	-6.19	2.6	17.00	-12.14	29.14	18.65	-10.91	29.56	*3.76*
Services	*50.25*	5.80	-1.43	7.2	8.72	-5.57	14.29	20.90	-6.42	27.33	*58.76*
Transport	*5.34*	-3.15	-5.84	2.7	1.63	-9.26	10.89	14.98	-8.00	22.99	*5.53*
Communications	*2.87*	20.66	-0.17	20.8	79.65	0.09	79.56	50.91	-0.04	50.95	*5.50*
Trade	*7.66*	1.91	0.54	1.4	11.06	-5.66	16.72	17.33	-4.98	22.31	*7.65*
Finance	*2.12*	44.60	-6.08	50.7	-0.83	-8.05	7.22	29.28	-7.52	36.80	*3.49*
Other Services	*32.26*	4.33	-0.97	5.3	3.64	-5.12	8.75	18.31	-6.93	25.24	*36.59*
Total GDP	*100.00*	**1.79**	-5.60	7.4	**3.72**	-10.16	13.87	**8.75**	-9.55	18.31	*100.00*

Source: Authors calculations based on data supplied by Rossen Rosenov at the Agency for Economic Analysis and Forecasting, and the National Statistics Institute, Sofia Bulgaria.

Table 5. Sources of Growth in the Private Sector in Bulgaria , 1998 - 2000

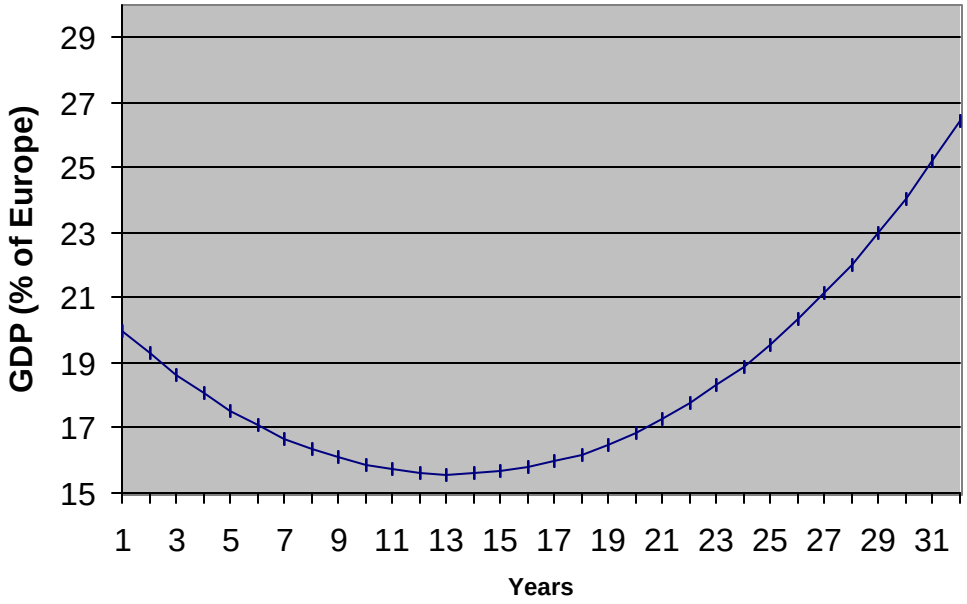
	1998	1999			First Quarter 2000			Second Quarter 2000			2000:Q2
		1998 to 1999			1999:Q1 - 2000:Q1			1999:Q2 - 2000:Q2			
	Share of Private Sector GDP %	Growth in Output	Growth in Employment	Growth in Productivity	Growth in Output	Growth in Employment	Growth in Productivity	Growth in Output	Growth in Employment	Growth in Productivity	Share of Private Sector GDP %
Agriculture and Forrestry	*32.46*	0.67	-1.95	2.6	-25.13	-9.83	-15.31	-28.65	-7.29	-21.36	*15.96*
Agriculture	*32.33*	0.59	-2.42	3.0	-25.27	-9.78	-15.49	-29.20	-7.10	-22.10	*15.81*
Forrestry, hunting and fishing	*0.13*	21.52	58.96	-37.4	152.03	-12.68	164.71	372.88	-18.67	391.55	*0.14*
Industry	*19.87*	15.64	4.40	11.2	44.85	8.00	36.86	51.97	9.44	42.53	*30.42*
Mining Industry	*0.16*	35.26	66.38	-31.1	399.85	254.20	145.65	218.56	198.99	19.57	*0.61*
Manufacturing Industry	*15.44*	20.83	3.69	17.1	38.27	7.30	30.97	53.72	8.86	44.86	*25.50*
Electicity, gas and water	*0.01*	-10.74	97.98	-108.7	-29.37	226.72	-256.09	308.56	362.02	-53.46	*0.01*
Construction	*4.26*	-3.89	6.78	-10.7	61.43	2.08	59.35	32.81	2.35	30.45	*4.29*
Services	*47.67*	6.47	7.42	-0.9	4.18	2.44	1.74	29.16	3.54	25.62	*53.63*
Transport	*4.03*	12.52	25.52	-13.0	12.37	12.87	-0.51	37.82	11.92	25.90	*4.73*
Communications	*0.98*	50.80	32.25	18.5	213.46	45.81	167.65	228.39	57.90	170.49	*3.27*
Trade	*9.43*	12.94	6.68	6.3	12.32	1.37	10.95	27.05	0.93	26.12	*10.20*
Finance	*1.50*	66.31	16.22	50.1	34.95	5.15	29.80	12.77	-1.06	13.83	*2.53*
Other Services	*31.73*	-0.42	1.60	-2.0	-6.30	-0.85	-5.45	22.65	4.56	18.09	*32.90*
Total private sector	100.00	**6.41**	4.82	1.6	**7.57**	4.44	3.13	**19.19**	5.74	13.45	**100.00**

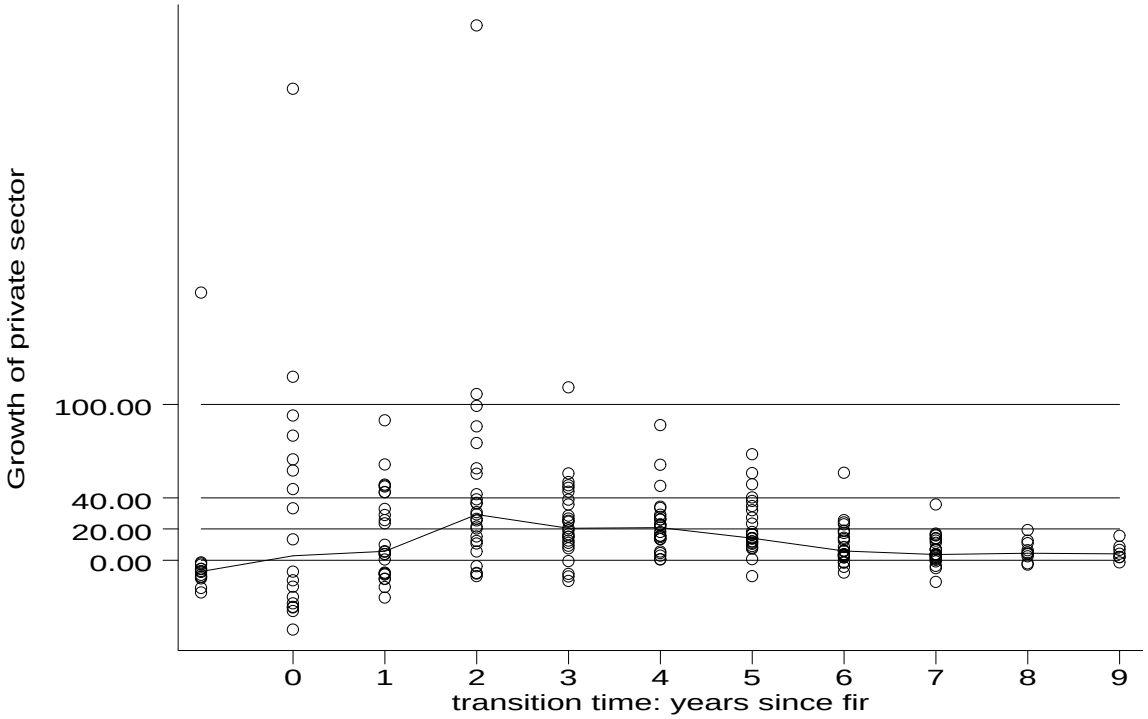
Source: Authors calculations based on data supplied by Rossen Rosenov at the Agency for Economic Analysis and Forecasting, and the National Statistics Institute, Sofia Bulgaria.



Economy 1. Bulgarian GDP per-capita Grows at 2 percent; European Union grows at 1 percent.
Economy 2. Bulgarian GDP per-capita grows at 2 percent, like Economy 1 initially, but that is a weighted average of the private sector growing at 6 and the state sector declining at -6.

Figure 2. An Economy with two sectors: one declining, the other growing, will appear to have a transitional recession

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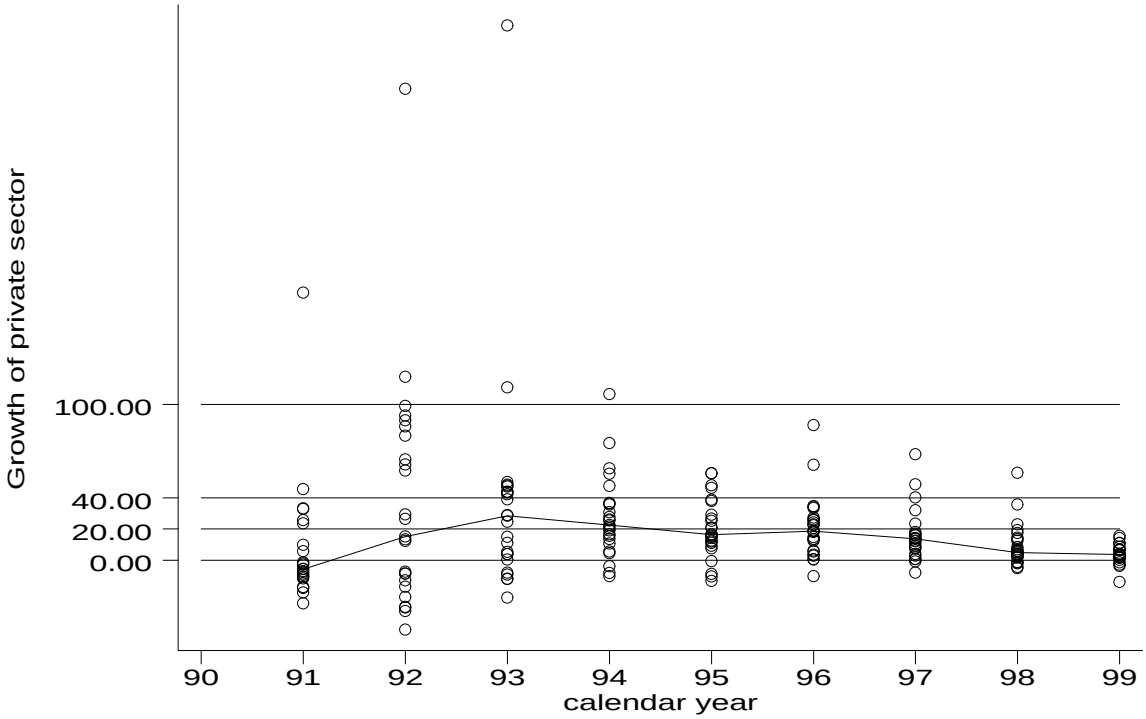
Growth of private sector
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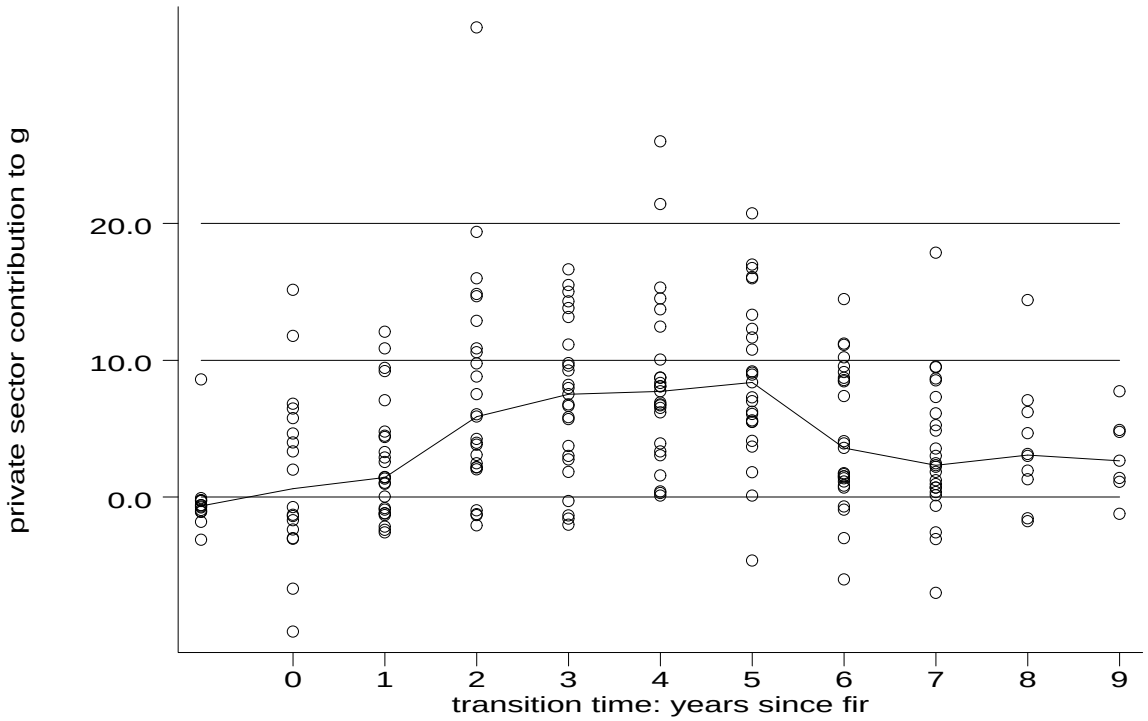
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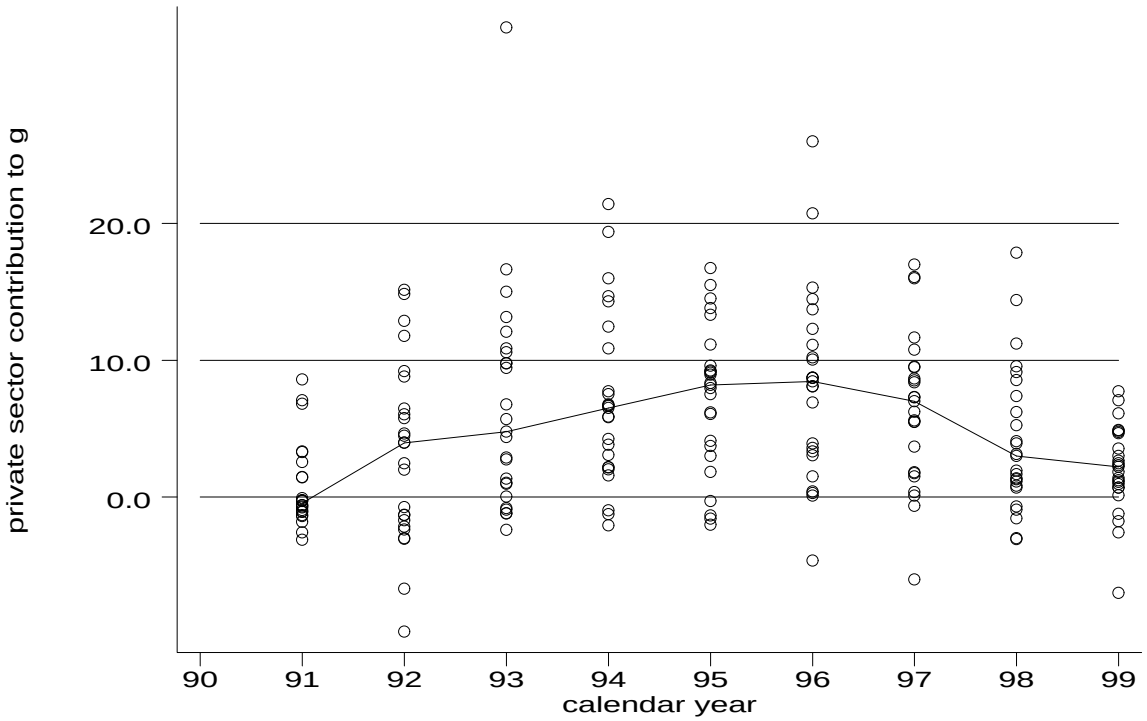
9
transition time: years since fir


private sector contribution to g
20.0
10.0
0.0
90
91
92
93
94
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98
99
calendar year

Table A2. Estimated Growth Rates and Contributions to Growth for the Private and State Sectors - Transition Economies

	Year	GDP pc	Share of GDP in Private Sector	Growth Per Annum		Contribution to Growth		Growth of GDP p.c. - whole economy
				Private	State	Private	State	
Albania	90	2577	5					
Albania	91	1863	5	-27.7	-27.7	-1.4	-26.3	-27.7
Albania	92	1767	10	89.7	-10.1	4.5	-9.6	-5.2
Albania	93	1958	40	343.2	-26.1	34.3	-23.5	10.8
Albania	94	2126	50	35.7	-9.5	14.3	-5.7	8.6
Albania	95	2286	60	29.0	-14.0	14.5	-7.0	7.5
Albania	96	2460	75	34.5	-32.7	20.7	-13.1	7.6
Albania	97	2262	75	-8.0	-8.0	-6.0	-2.0	-8.0
Albania	98	2420	75	7.0	7.0	5.3	1.7	7.0
Albania	99	2571	75	6.2	6.2	4.7	1.6	6.2
Armenia	90	3982						
Armenia	91	3442	30					
Armenia	92	1982	35	-32.8	-46.5	-9.8	-32.6	-42.4
Armenia	93	1801	40	3.8	-16.1	1.3	-10.5	-9.1
Armenia	94	1899	40	5.5	5.4	2.2	3.3	5.5
Armenia	95	2034	45	20.5	-1.8	8.2	-1.1	7.1
Armenia	96	2160	50	18.0	-3.5	8.1	-1.9	6.2
Armenia	97	2238	55	14.0	-6.7	7.0	-3.4	3.6
Armenia	98	2408	60	17.4	-4.4	9.6	-2.0	7.6
Armenia	99	2496	60	3.7	3.7	2.2	1.5	3.7
Azerbaijan	90	3774	10					
Azerbaijan	91	3692	10	-2.2	-2.2	-0.2	-2.0	-2.2
Azerbaijan	92	2816	10	-23.7	-23.7	-2.4	-21.4	-23.7
Azerbaijan	93	2141	10	-24.0	-24.0	-2.4	-21.6	-24.0
Azerbaijan	94	1700	20	58.8	-29.4	5.9	-26.5	-20.6
Azerbaijan	95	1484	25	9.1	-18.2	1.8	-14.5	-12.7
Azerbaijan	96	1490	25	0.4	0.4	0.1	0.3	0.4
Azerbaijan	97	1564	40	67.9	-16.0	17.0	-12.0	5.0
Azerbaijan	98	1707	45	22.8	0.0	9.1	0.0	9.1
Azerbaijan	99	1821	45	6.7	6.7	3.0	3.7	6.7
Belarus	90	6721	5					
Belarus	91	6619	5	-1.5	-1.5	-0.1	-1.4	-1.5
Belarus	92	5948	10	79.7	-14.9	4.0	-14.1	-10.1
Belarus	93	5467	10	-8.1	-8.1	-0.8	-7.3	-8.1
Belarus	94	4766	15	30.8	-17.7	3.1	-15.9	-12.8
Belarus	95	4263	15	-10.5	-10.6	-1.6	-9.0	-10.5
Belarus	96	4380	15	2.7	2.7	0.4	2.3	2.7
Belarus	97	4879	20	48.5	4.8	7.3	4.1	11.4
Belarus	98	5285	20	8.3	8.3	1.7	6.7	8.3
Belarus	99	5469	20	3.5	3.5	0.7	2.8	3.5
Bulgaria	90	5341	10					
Bulgaria	91	4743	15	33.2	-16.1	3.3	-14.5	-11.2
Bulgaria	92	4590	25	61.3	-14.6	9.2	-12.4	-3.2
Bulgaria	93	4557	35	39.0	-14.0	9.8	-10.5	-0.7
Bulgaria	94	4651	40	16.6	-5.8	5.8	-3.8	2.0
Bulgaria	95	4774	45	15.5	-5.9	6.2	-3.5	2.7
Bulgaria	96	4280	45	-10.3	-10.3	-4.6	-5.7	-10.3
Bulgaria	97	4001	50	3.9	-15.0	1.8	-8.3	-6.5
Bulgaria	98	4176	65	35.7	-26.9	17.9	-13.5	4.4
Bulgaria	99	4300	70	10.9	-11.7	7.1	-4.1	3.0

Croatia	90	5205	15					
Croatia	91	4282	20	9.7	-22.6	1.5	-19.2	-17.7
Croatia	92	3847	25	12.3	-15.8	2.5	-12.6	-10.2
Croatia	93	3558	30	11.0	-13.7	2.8	-10.3	-7.5
Croatia	94	3739	35	22.6	-2.4	6.8	-1.7	5.1
Croatia	95	4013	45	38.0	-9.2	13.3	-6.0	7.3
Croatia	96	4290	50	18.8	-2.8	8.5	-1.5	6.9
Croatia	97	4565	55	17.1	-4.2	8.6	-2.1	6.4
Croatia	98	4673	55	2.3	2.4	1.3	1.1	2.3
Croatia	99	4653	60	8.6	-11.5	4.7	-5.2	-0.4
Czech Republic	90	10874	10					
Czech Republic	91	9626	15	32.8	-16.4	3.3	-14.8	-11.5
Czech Republic	92	9568	30	98.8	-18.1	14.8	-15.4	-0.6
Czech Republic	93	9568	45	50.0	-21.4	15.0	-15.0	0.0
Czech Republic	94	9775	65	47.6	-35.0	21.4	-19.2	2.2
Czech Republic	95	10358	70	14.1	-9.2	9.2	-3.2	6.0
Czech Republic	96	10870	75	12.4	-12.5	8.7	-3.8	4.9
Czech Republic	97	10776	75	-0.9	-0.9	-0.7	-0.2	-0.9
Czech Republic	98	10552	75	-2.1	-2.1	-1.6	-0.5	-2.1
Czech Republic	99	10536	80	6.5	-20.1	4.9	-5.0	-0.2
Estonia	90	5642	10					
Estonia	91	5212	10	-7.6	-7.6	-0.8	-6.9	-7.6
Estonia	92	4537	25	117.6	-27.5	11.8	-24.7	-13.0
Estonia	93	4206	40	48.3	-25.8	12.1	-19.4	-7.3
Estonia	94	4180	55	36.7	-25.5	14.7	-15.3	-0.6
Estonia	95	4424	65	25.1	-17.7	13.8	-8.0	5.8
Estonia	96	4660	70	13.4	-9.7	8.7	-3.4	5.3
Estonia	97	5217	70	12.0	12.0	8.4	3.6	12.0
Estonia	98	5521	70	5.8	5.8	4.1	1.7	5.8
Estonia	99	5510	75	6.9	-16.8	4.8	-5.0	-0.2
Georgia	90	5279	15					
Georgia	91	4179	15	-20.8	-20.8	-3.1	-17.7	-20.8
Georgia	92	2311	15	-44.7	-44.7	-6.7	-38.0	-44.7
Georgia	93	1738	20	0.3	-29.2	0.0	-24.8	-24.8
Georgia	94	1558	20	-10.4	-10.4	-2.1	-8.3	-10.4
Georgia	95	1617	30	55.6	-9.2	11.1	-7.3	3.8
Georgia	96	1810	50	86.6	-20.0	26.0	-14.0	11.9
Georgia	97	2029	55	23.3	0.9	11.7	0.4	12.1
Georgia	98	2109	60	13.4	-7.6	7.4	-3.4	3.9
Georgia	99	2190	60	3.9	3.8	2.3	1.5	3.9
Hungary	90	7418	25					
Hungary	91	6536	30	5.7	-17.8	1.4	-13.3	-11.9
Hungary	92	6341	40	29.4	-16.8	8.8	-11.8	-3.0
Hungary	93	6314	50	24.5	-17.0	9.8	-10.2	-0.4
Hungary	94	6509	55	13.4	-7.2	6.7	-3.6	3.1
Hungary	95	6624	60	11.0	-9.5	6.1	-4.3	1.8
Hungary	96	6730	70	18.5	-23.8	11.1	-9.5	1.6
Hungary	97	7058	75	12.4	-12.6	8.7	-3.8	4.9
Hungary	98	7421	85	19.2	-36.9	14.4	-9.2	5.2
Hungary	99	7772	80	-1.4	39.6	-1.2	5.9	4.8

Kazakhstan	90	5170	5					
Kazakhstan	91	4562	5	-11.8	-11.8	-0.6	-11.2	-11.8
Kazakhstan	92	4395	10	92.7	-8.7	4.6	-8.3	-3.7
Kazakhstan	93	3983	10	-9.4	-9.4	-0.9	-8.4	-9.4
Kazakhstan	94	3486	20	75.0	-22.2	7.5	-20.0	-12.5
Kazakhstan	95	3207	25	15.0	-13.8	3.0	-11.0	-8.0
Kazakhstan	96	3230	40	61.2	-19.4	15.3	-14.6	0.7
Kazakhstan	97	3293	55	40.2	-23.5	16.1	-14.1	2.0
Kazakhstan	98	3237	55	-1.7	-1.7	-0.9	-0.8	-1.7
Kazakhstan	99	3296	60	11.1	-9.5	6.1	-4.3	1.8
Kyrgyz Republic	90	3731	5					
Kyrgyz Republic	91	3378	15	171.6	-19.0	8.6	-18.0	-9.5
Kyrgyz Republic	92	2868	20	13.2	-20.1	2.0	-17.1	-15.1
Kyrgyz Republic	93	2414	25	5.2	-21.1	1.0	-16.9	-15.8
Kyrgyz Republic	94	1933	30	-3.9	-25.3	-1.0	-18.9	-19.9
Kyrgyz Republic	95	1834	40	26.5	-18.7	8.0	-13.1	-5.1
Kyrgyz Republic	96	1970	50	34.3	-10.5	13.7	-6.3	7.4
Kyrgyz Republic	97	2166	60	32.0	-12.0	16.0	-6.0	10.0
Kyrgyz Republic	98	2207	60	1.9	1.9	1.1	0.8	1.9
Kyrgyz Republic	99	2275	60	3.1	3.1	1.9	1.2	3.1
Latvia	90	6622	10					
Latvia	91	5906	10	-10.8	-10.8	-1.1	-9.7	-10.8
Latvia	92	3892	25	64.7	-45.1	6.5	-40.6	-34.1
Latvia	93	3369	30	3.9	-19.2	1.0	-14.4	-13.4
Latvia	94	3441	40	36.2	-12.5	10.9	-8.7	2.1
Latvia	95	3472	55	38.7	-24.3	15.5	-14.6	0.9
Latvia	96	3650	60	14.7	-6.6	8.1	-2.9	5.1
Latvia	97	4029	60	10.4	10.4	6.2	4.2	10.4
Latvia	98	4249	65	14.2	-7.7	8.5	-3.1	5.4
Latvia	99	4310	65	1.4	1.4	0.9	0.5	1.4
Lithuania	90	7106	10					
Lithuania	91	6688	10	-5.9	-5.9	-0.6	-5.3	-5.9
Lithuania	92	5267	20	57.5	-30.0	5.8	-27.0	-21.2
Lithuania	93	4429	35	47.2	-31.7	9.4	-25.3	-15.9
Lithuania	94	4013	60	55.3	-44.2	19.4	-28.8	-9.4
Lithuania	95	4169	65	12.5	-9.1	7.5	-3.6	3.9
Lithuania	96	4390	70	13.4	-9.7	8.7	-3.4	5.3
Lithuania	97	4735	70	7.9	7.9	5.5	2.4	7.9
Lithuania	98	5000	70	5.6	5.6	3.9	1.7	5.6
Lithuania	99	4815	70	-3.7	-3.7	-2.6	-1.1	-3.7
Macedonia	90	4249	15					
Macedonia	91	3514	15	-17.3	-17.3	-2.6	-14.7	-17.3
Macedonia	92	3206	15	-8.8	-8.8	-1.3	-7.5	-8.8
Macedonia	93	2896	35	110.8	-30.9	16.6	-26.3	-9.7
Macedonia	94	3025	35	4.5	4.5	1.6	2.9	4.5
Macedonia	95	2958	40	11.7	-9.7	4.1	-6.3	-2.2
Macedonia	96	2970	50	25.5	-16.3	10.2	-9.8	0.4
Macedonia	97	2991	50	0.7	0.7	0.4	0.4	0.7
Macedonia	98	3057	55	12.4	-8.0	6.2	-4.0	2.2
Macedonia	99	3119	55	2.0	2.0	1.1	0.9	2.0

Moldova	89	4208						
Moldova	90	4073	10					
Moldova	91	3338	10	-18.1	-18.0	-1.8	-16.2	-18.1
Moldova	92	2336	10	-30.0	-30.0	-3.0	-27.0	-30.0
Moldova	93	2302	15	47.8	-6.9	4.8	-6.2	-1.5
Moldova	94	1582	20	-8.3	-35.3	-1.2	-30.0	-31.3
Moldova	95	1561	30	48.0	-13.7	9.6	-10.9	-1.3
Moldova	96	1440	40	23.0	-20.9	6.9	-14.7	-7.8
Moldova	97	1459	45	14.0	-7.1	5.6	-4.3	1.3
Moldova	98	1334	50	1.5	-16.9	0.7	-9.3	-8.6
Moldova	99	1274	45	-14.0	5.1	-7.0	2.5	-4.5
Poland	90	5148	30					
Poland	91	4770	40	23.6	-20.6	7.1	-14.4	-7.3
Poland	92	4879	45	15.1	-6.2	6.0	-3.7	2.3
Poland	93	5051	50	15.0	-5.9	6.8	-3.2	3.5
Poland	94	5300	55	15.4	-5.6	7.7	-2.8	4.9
Poland	95	5661	60	16.5	-5.1	9.1	-2.3	6.8
Poland	96	6000	60	6.0	6.0	3.6	2.4	6.0
Poland	97	6413	65	15.8	-6.5	9.5	-2.6	6.9
Poland	98	6723	65	4.8	4.8	3.1	1.7	4.8
Poland	99	6998	65	4.1	4.1	2.7	1.4	4.1
Romania	90	4855	15					
Romania	91	4236	25	45.4	-23.0	6.8	-19.6	-12.8
Romania	92	3869	25	-8.7	-8.7	-2.2	-6.5	-8.7
Romania	93	3933	35	42.3	-11.9	10.6	-8.9	1.7
Romania	94	4095	40	19.0	-3.9	6.7	-2.5	4.1
Romania	95	4397	45	20.8	-1.6	8.3	-0.9	7.4
Romania	96	4580	55	27.3	-14.8	12.3	-8.1	4.2
Romania	97	4312	60	2.7	-16.3	1.5	-7.3	-5.9
Romania	98	4092	60	-5.1	-5.1	-3.1	-2.0	-5.1
Romania	99	3972	60	-2.9	-2.9	-1.7	-1.2	-2.9
Russian Federation	90	7358	5					
Russian Federation	91	6944	5	-5.6	-5.6	-0.3	-5.3	-5.6
Russian Federation	92	5589	25	302.5	-36.5	15.1	-34.6	-19.5
Russian Federation	93	5011	40	43.4	-28.3	10.9	-21.2	-10.4
Russian Federation	94	4434	50	10.6	-26.3	4.2	-15.8	-11.5
Russian Federation	95	4331	55	7.4	-12.1	3.7	-6.0	-2.3
Russian Federation	96	4190	60	5.5	-14.0	3.0	-6.3	-3.3
Russian Federation	97	4236	70	18.0	-24.2	10.8	-9.7	1.1
Russian Federation	98	4054	70	-4.3	-4.3	-3.0	-1.3	-4.3
Russian Federation	99	4197	70	3.5	3.5	2.5	1.1	3.5
Slovak Republic	90	8442	10					
Slovak Republic	91	7072	15	25.7	-20.9	2.6	-18.8	-16.2
Slovak Republic	92	6569	30	85.8	-23.5	12.9	-20.0	-7.1
Slovak Republic	93	6299	45	43.8	-24.7	13.1	-17.3	-4.1
Slovak Republic	94	6580	55	27.7	-14.5	12.5	-8.0	4.5
Slovak Republic	95	7013	60	16.3	-5.3	9.0	-2.4	6.6
Slovak Republic	96	7460	70	24.1	-20.2	14.5	-8.1	6.4
Slovak Republic	97	7910	75	13.6	-11.6	9.5	-3.5	6.0
Slovak Republic	98	8226	75	4.0	4.0	3.0	1.0	4.0
Slovak Republic	99	8378	75	1.8	1.8	1.4	0.5	1.8

Slovenia	90	12084	15					
Slovenia	91	11027	15	-8.7	-8.7	-1.3	-7.4	-8.7
Slovenia	92	10455	20	26.4	-10.8	4.0	-9.1	-5.2
Slovenia	93	10744	25	28.4	-3.7	5.7	-2.9	2.8
Slovenia	94	11287	30	26.1	-1.9	6.5	-1.5	5.1
Slovenia	95	11719	45	55.7	-18.4	16.7	-12.9	3.8
Slovenia	96	12110	45	3.3	3.3	1.5	1.8	3.3
Slovenia	97	12670	50	16.2	-4.9	7.3	-2.7	4.6
Slovenia	98	13160	50	3.9	3.9	2.0	1.9	3.9
Slovenia	99	13814	55	15.5	-5.5	7.8	-2.8	5.0
Tajikistan	90	2491	10					
Tajikistan	91	2251	10	-9.6	-9.6	-1.0	-8.7	-9.6
Tajikistan	92	1564	10	-30.5	-30.5	-3.1	-27.5	-30.5
Tajikistan	93	1374	10	-12.2	-12.1	-1.2	-10.9	-12.2
Tajikistan	94	1100	15	20.1	-24.4	2.0	-22.0	-19.9
Tajikistan	95	952	15	-13.5	-13.5	-2.0	-11.4	-13.5
Tajikistan	96	900	20	26.1	-11.0	3.9	-9.4	-5.5
Tajikistan	97	905	20	0.5	0.6	0.1	0.4	0.5
Tajikistan	98	941	30	56.0	-9.0	11.2	-7.2	4.0
Tajikistan	99	963	30	2.3	2.3	0.7	1.6	2.3
Turkmenistan	90	3920	10					
Turkmenistan	91	3643	10	-7.1	-7.1	-0.7	-6.4	-7.1
Turkmenistan	92	3372	10	-7.4	-7.4	-0.7	-6.7	-7.4
Turkmenistan	93	2971	10	-11.9	-11.9	-1.2	-10.7	-11.9
Turkmenistan	94	2408	15	21.6	-23.5	2.2	-21.1	-18.9
Turkmenistan	95	2193	15	-8.9	-8.9	-1.3	-7.6	-8.9
Turkmenistan	96	2010	20	22.2	-13.7	3.3	-11.7	-8.3
Turkmenistan	97	1753	25	9.0	-18.2	1.8	-14.6	-12.8
Turkmenistan	98	1812	25	3.3	3.4	0.8	2.5	3.3
Turkmenistan	99	2069	25	14.2	14.2	3.6	10.6	14.2
Ukraine	90	5661	10					
Ukraine	91	5055	10	-10.7	-10.7	-1.1	-9.6	-10.7
Ukraine	92	4192	10	-17.1	-17.1	-1.7	-15.4	-17.1
Ukraine	93	3603	15	28.9	-18.8	2.9	-16.9	-14.1
Ukraine	94	2790	40	106.5	-45.3	16.0	-38.5	-22.6
Ukraine	95	2462	45	-0.7	-19.1	-0.3	-11.5	-11.7
Ukraine	96	2230	50	0.6	-17.7	0.3	-9.7	-9.4
Ukraine	97	2176	55	7.3	-12.2	3.7	-6.1	-2.4
Ukraine	98	2149	55	-1.3	-1.2	-0.7	-0.6	-1.3
Ukraine	99	2154	55	0.2	0.2	0.1	0.1	0.2
Uzbekistan	90	3298	10					
Uzbekistan	91	3202	10	-2.9	-2.9	-0.3	-2.6	-2.9
Uzbekistan	92	2785	10	-13.0	-13.0	-1.3	-11.7	-13.0
Uzbekistan	93	2668	15	43.7	-9.5	4.4	-8.6	-4.2
Uzbekistan	94	2510	20	25.5	-11.5	3.8	-9.7	-5.9
Uzbekistan	95	2448	30	46.3	-14.7	9.3	-11.7	-2.5
Uzbekistan	96	2450	40	33.5	-14.2	10.1	-10.0	0.1
Uzbekistan	97	2476	45	13.7	-7.4	5.5	-4.4	1.1
Uzbekistan	98	2551	45	3.0	3.0	1.4	1.7	3.0
Uzbekistan	99	2621	45	2.7	2.7	1.2	1.5	2.7